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| **Unit 3: Demand and Supply: An Elaboration** | |
|  | **Learning Objectives:** | |
|  | 1. Explain the effects on equilibrium price and quantity traded of simultaneous changes in supply and demand. 2. Explain why markets don't always work well. 3. Understand why price ceilings cause shortages. 4. Understand that price floors cause surpluses. 5. Ask some interesting what if questions concerning the shape of demand and supply curves. |  |
|  | **Learning Materials:** | |
|  | * Chapter 3 - Principles of Microeconomics | |
|  | **Overview of this Unit** | |
|  | In the last unit we introduced you to the theory of supply and demand.  In this unit we will look more deeply at the interaction of supply and demand in the free market and the role the government plays in moderating the violent swings in price that could occur as supply and demand conditions change.   Unfortunately, despite the benefits of a free marketplace, price volatility often creates challenges for consumers and suppliers alike.  In this unit we will look at three basic ways that government may get involved in the free market to protect either consumers (buyers) or producers (suppliers) from the vagaries of the free market. First we look at government imposed price limits known as price ceilings - these are designed to help consumers from overly high prices. Next we look at government imposed price guarantees known as price floors - these help ensure producers make at least a fair return on their investment. Last we look at Minimum wage legislation which government puts in place to ensure workers make a 'living wage". Each of these controls has implications - positive and negative on the free market.  A classic example of market instability occurs quite often with the price of gas at the pumps. The volatility of the oil market means prices are always in flux. In Newfoundland and Labrador - and in the rest of Canada as well, this leads to problems for consumers - gas prices were always going up! If there is one thing that consumers dislike more than rising prices it is prices that rise erratically. To help resolve this volatility problem the provincial government began regulating gas prices. In this unit we will apply the theory that we have learned to explore the issue and impact of government involvement in the market. | |

EC1100 Microeconomics - PT (CL) - Unit 3.  Supply and Demand Continued -    Simultaneous Change in Supply and Demand

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| **Unit 3 - Topic 1:  Simultaneous Change in Supply and Demand** |
| The market system is a very responsive system.   Anticipating the movement of the market can be quite challenging even if you can anticipate the direction of the change to take advantage of it, other market forces may come into play that erase the value of your actions.  Take for example if you were to anticipate that employers will value your knowledge of Economics - because students with this knowledge are in demand in the current job market. Remembering from our last unit, this anticipation in future demand by all students of economics means that there will be a shift in the supply curve - more students will be supplied at any given price. The anticipation in demand means there is a rush to supply!  Unfortunately, as more economists are supplied, the demand will be met - forcing down demand for the very area in which people are anxious to fill.  This also forces down the price and effectively lowers wage offerings.  As prices and demand drop, fewer people enter the economics field. Eventually, a shortage will result and we'll be back to where we started.  These wild fluctuations in supply, price and demand are not appreciated by anybody in the market - especially students!  From this simple example you can see that the market system is very responsive possibly too responsive in some cases.  In summary:   |  | | --- | | A simultaneous **increase** in demand and supply causes an **increase** in equilibrium quantity and an indeterminate change in price | | A simultaneous **decrease** in demand and supply causes a **decrease** in equilibrium quantity and an indeterminate change in price | |

EC1100 Microeconomics - PT (CL) - Unit 3.  Supply and Demand Continued -    Price Controls - Price Ceilings

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| **Unit 3 - Topic 2:  Price Controls - Price Ceilings** |
| Sometimes government finds it in the best interest of the public to directly influence the market so as to effectively manage price or manage supply. Markets do not always produce equitable results because resources and products are allocated according to demand and supply. Put more simply; the market does not allocate on the basis of who should or should not get things!  Government's job is to ensure that supplies and prices are equitable - especially in the near term.  The tools government has at its disposal to do this include Price Controls in the form of Price Ceilings and Price Floors as well as minimum wage legislation.  These are the common examples that we see every day - we will now examine how and why each of these forms of government imposed market regulation work and why sometimes they may not.  **Price Control using Price Ceilings**  Price ceilings are laws created by government that effectively set a maximum price that can be charged for a product or service. In Newfoundland and Labrador, the provincial governments **set** the maximum price for gasoline through Petroleum Pricing Commission (PPC). ([www.pub.nf.ca](http://www.pub.nf.ca))  If we hypothetically say that the maximum allowable price set by the PPC is $1.00/litre this will shield consumers from market gas prices above this amount. If the market price for gas is $.90 a litre the ceiling will have no affect, however if the market price rose to $1.05 - then the market price has moved higher than oil suppliers can legally charge. Consumers would be happy with the price cap but oil suppliers would be upset that they would be forced to sell the product at a $.05 loss per liter.  Why would Consumers be happy? From a consumer's point of view they would feel as if they are getting a deal and they, in turn, would be inclined to demand/buy more gas at the lower than market price.  Why would oil suppliers be upset? Put yourself in the shoes of the oil companies in a free market they could get $.05 more a litre. ($1.05 / litre at market versus $1.00 maximum regulated). Oil companies would not be too happy at this lost potential revenue. In fact, they would be inclined to make less gas available in the market.  Two of these factors combine to help create a shortage in the market - this would be bad for consumers who may have trouble finding any gas at all for the artificially low price.  Another popular type of government imposed restriction on market prices is rent control. This imposition of price ceilings is most popular within large cities where rental properties are in short supply. Limited quantities of available housing tend to force prices up often out of the reach of less fortunate members of society. Rent Controls, a form of price ceiling, help to keep rental prices down.  However, as we have seen with oil price regulation, rent control laws tend to result in apartment shortages as landlords attempt to find more profitable options for their buildings.  ***Alternatives to Price Ceilings***  Many economists argue against Price Ceiling citing the rationale outlined above. They have suggested other alternatives to government regulation:   * Let the market operate unhindered - The standard argument by capitalists is that the market should be allowed to operate without any interference from government. Although the market allows economic objectives to be reached it is not necessarily so good at achieving social objectives. * Use a First-come First-served system (FCFS) of distribution of the available product - Government needs not only to be concerned with those who can get to the product or service first it must ensure that everybody has a fair opportunity to avail of limited quantities of supplies. * Let producers decide who they want to sell to - If producers were allowed to choose whom they want to sell to society's needs will in all likelihood not be met. * Ration the supply so that each potential buyer gets a limited quantity of product. - Rationing ensures everybody gets some product but still does not adequately meet the needs of everybody. |

EC1100 Microeconomics - PT (CL) - Unit 3.  Supply and Demand Continued -    Price Controls - Price Floors

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| **Unit 3 - Topic 3:  Price Controls - Price Floors** |
| A similar, but opposite approach used by government to regulate prices is the imposition of Price Floors.  When governments impose price floors they effectively set a minimum price for a product.   Again in Newfoundland and Labrador price floors exist for many locally produced products such as Milk and Eggs.  If we hypothetically say that the minimum allowable price set by the Egg Marketing Board is $2.50/dozen yet at the same time in the free market equilibrium price is at $2.00/dozen.  From a **consumer’s** point of view, they would be unhappy with the artificially high price of eggs and thereby they would be inclined to demand/buy fewer eggs.  Putting yourself in the shoes of egg farmers they would be a most happy lot in a free market they would get $0.50 less a dozen than they are getting in the controlled market. ($2.00 / dozen at market but $2.50 / dozen minimum regulated).  The higher price would help egg farmers compete and this would help to shore up the industry.  Egg farmers would see this as an opportunity to make extra money and they in turn would be inclined to make more eggs available to the market.   Two of these factors combine to help create a surplus of eggs in the market which somebody has to do something about.  That somebody would be government and they (we the taxpayer) would be forced to buy up the excess!  ***Alternatives to Price Floors***  Like price ceilings, price floors tend not to work well in the long term because of the laws of economics.   Economists argue that the surplus that results from the imposition of the price ceiling creates significant problems in and of itself.   Several solutions have been proposed to rid the government of the excess supply:  Store the surplus product, if possible, for later use   1. Pay companies not to produce the product - Sometimes in western Canada, farmers are paid not to produce certain crops.  This has the effect of restricting the supply and thereby securing market prices. 2. Convert the surplus product, if possible, into other products that could be sold. - In Prince Edward Island Dairy Farmers are encouraged to produce "industrial" milk which is milk destined for reprocessing into milk related products such as cheese. 3. Sell the excess supply to other countries who are willing to buy it - In Newfoundland and Labrador, excess capelin are sold to Japanese buyers preventing a glut of local product coming to the market.. 4. Give the excess supply away in the form of aid or foreign aid. - Every year hundreds of tonnes of excess Canadian wheat is shipped abroad as part of our food aid program. 5. Destroy the excess.  This is not a particularly prudent option because of the perception of waste.  Sadly, destruction of oversupply is all too common in the farming and fishing industries. |

EC1100 Microeconomics - PT (CL) - Unit 3.  Supply and Demand Continued -    Is the Minimum Wage a Cause of Unemployment?

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| **Unit 3 - Topic 4: Does Minimum Wage Legislation Cause Unemployment?** |
| The minimum labour wage is a form of price floor that government has created to achieve social objectives rather than economic ones.   The Minimum wage is designed to ensure that all workers make a "reasonable' amount of money for their efforts.  At the time of this writing (July 2010) the minimum wage in Newfoundland and Labrador is 10.00 an hour.  Organizations that advocate workers rights such as unions, often argue that a higher minimum wage should be put in place.  They correctly argue that $10.00 an hour still impoverishes a person earning the minimum wage ($10.00 x 40 hours per week x 52 weeks a year = $20,800 annual salary).  But will a higher minimum wage have negative consequences? The answer is yes, and the economic explanation for this helps explain why better minimum wage legislation is often a political hot potato!  Minimum wages only affect the low end of the job market and anyone earning above the minimum is not affected by it.  The low end of the job market is relatively easy to enter because of minimum skill requirements.  As minimum wages go up more and more people will be drawn into the labour market.   At the same time, as employers are forced to pay more to each worker they are less willing to hire these workers.  The glut of workers is met with decreased demand - this results in pressure to decrease wage rates and unfortunately increased unemployment.  Although a higher minimum wage is a noble social cause it may result in greater unemployment which would defeat the purpose of the initiative. |

EC1100 Microeconomics - PT (CL) - Unit 3.  Supply and Demand Continued -    Interactive Graph - Price Ceilings and Floors

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| **Unit 3: Interactive Graph - Price Ceilings and Floors** |
| **Graphing Exercise: Demand and Supply - An Elaboration**  Government authorities often feel political pressure that a market price is either unfairly high to buyers or unfairly low to sellers. Sometimes the government responds by establishing a legal limit on how high or low the price may go. Prices at or below an established ceiling and prices at or above a floor are legal but disrupt the rationing function of prices by creating either shortages or surpluses.  **Exploration: How do price controls affect the ability of markets to allocate goods and services?** |

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| The graph shows a typical market in equilibrium at price Pe. To illustrate the impact of an effective price floor, click inside the red box; click inside the blue box to illustrate an effective price ceiling. Once a ceiling or floor has been established, you can drag on the green triangle price slider to adjust prices within the legal range. |

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| **Self Quiz** | | |
| ***1.*** | How will a price floor affect a competitive market? | Show Answer |
| ***2.*** | How will a price ceiling affect a competitive market? | Show Answer |
| ***3.*** | Experiment on your own. After establishing a floor or ceiling with the mouse, click on the level just established and drag it within the box to change its level. What generalizations can you draw regarding the level of the floor or ceiling and the size of the resulting surplus or shortage? | Show Answer |
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| Economic growth allows for expanded choices: larger quantities of both pizzas and robots become attainable with either advances in technology or the availability of greater resources. One way that greater resources may become available is by choosing to use some of society's currently available resources to invest in the future. For example, by spending on education or research, or by producing capital goods.  The amount of resources available to an economy at some future point depends upon the choices it makes today. To use the graph, use the mouse to drag the scroll bar button to the left or right, observing the impact of different choices on the future position of the production possibilities curve.  **Discussion Board Posting for Unit Three: *Demand and Supply – An Elaboration***  Back in the 1980's the Trudeau Liberal government initiated a policy designed to ensure adequate energy supplies for Canada in the midst of an energy shortage. This policy know as the national energy program (NEP) resulted in among other things, the creation of Petro-Canada and the rise of western alienation - Alberta was forced to sell oil to eastern Canada a less than market prices. (find out more about the NEP at <http://www.abheritage.ca/abpolitics/events/issues_nep.html> ). Read about the NEP. Discuss government's motives for implementing the NEP. Using the economic theory of price controls, discuss the positive and negative side effects of the NEP on Alberta? on Ontario? Should government impose a similar program today?  By Wednesday, go to the Discussion Board and post your response to this statement. Do you agree or disagree? Why or why not"? Respond to at least one other posting by Saturday.  **Note:** Respond to the topic “*Unit Three: Demand and Supply – An Elaboration*” |

**Source:** McGraw-Hill Ryerson, 2004.

EC1100 Microeconomics - PT (CL) - Unit 3.  Supply and Demand Continued -    Summary

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| **Unit 3 - Summary** |
| In this unit, we discussed the effects on equilibrium price and quantity traded and simultaneous changes in supply and demand.   These simultaneous changes demonstrated that operation of the market system.   Although the market system works well, there are problems that government tries to resolve.   Price ceilings are imposed to create a maximum price for a given product.  Unfortunately this measure can causes shortages if the ceiling is below the market equilibrium price for the product.  Price floors are yet another tool that government uses to set price minimums.  Price floors can result in surpluses if the equilibrium price for the given product falls below the price floor. |

EC1100 Microeconomics - PT (CL) - Unit 3.  Supply and Demand Continued -    Suggested Problems

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| **Unit 3 - Suggested Problems** |
| In order to reinforce what you have learned in this unit I suggest you review the following end-of chapter problems.  The following problems are located at the end of the chapter.  Once you have attempted these please review  [Student Answer Key](http://highered.mcgraw-hill.com/sites/0070946418/student_view0/answer_key.html).   * **#36a – Key Problem** * **#40a** * **#43a** |

EC1100 Microeconomics - PT (CL) - Unit 3.  Supply and Demand Continued -    Additional Material

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| **Unit 3 - Additional Material** |
| Select a link below to view additional course materials:   * [Web Links](http://highered.mcgraw-hill.com/sites/0070946418/student_view0/chapter3/web_links.html) * [Multiple Choice Quiz](http://highered.mcgraw-hill.com/sites/0070946418/student_view0/chapter3/multiple_choice_quiz.html) * [Internet Application Quiz](http://highered.mcgraw-hill.com/sites/0070946418/student_view0/chapter3/internet_application_questions.html) * [Sample Exam Questions](http://highered.mcgraw-hill.com/sites/0070946418/student_view0/chapter3/sample_exam_questions.html) * [Glossary](http://highered.mcgraw-hill.com/sites/0070946418/student_view0/chapter3/glossary.html) * [Student Answer Key](http://highered.mcgraw-hill.com/sites/0070946418/student_view0/chapter3/answer_key.html) |